

# Louisiana Broadband Mapping Program

## Data Submission Guidelines

January – June 2013



**Baker**

Michael Baker Jr., Inc.

## Table of Contents

Glossary.....	1
1. Introduction .....	5
1.1 Background .....	5
1.2 Regulatory Requirements .....	5
1.3 About the Guidelines .....	6
1.4 Contacts .....	6
2. Data Submission Guidelines .....	7
<b>2.1 Requested Data</b> .....	7
2.1.1 Broadband Service Availability in the Provider’s Service Area (Refer to Sections 3.1, 3.2, 3.3, 3.4, 3.8, 4.1, 4.2, 4.3, 4.4, & 4.8).....	9
2.1.1.1 Individual Street Address .....	9
2.1.1.2 Street Segment Address Range.....	10
2.1.1.3 US Census Block Served .....	11
2.1.1.4 Services not Identified by a Specific Address (Refer to Section 3.8 & 4.8).....	12
2.1.1.5 Service Overview.....	13
2.1.2 Middle-mile and Backbone Interconnection Points (Refer to Sections 3.5 & 4.5) .....	14
2.1.3 Community Anchor Institutions (Refer to Sections 3.7 & 4.7).....	15
2.1.4 Last Mile Connection Points (Optional) (Refer to Sections 3.6 & 4.6) .....	16
2.1.5 WISP Antenna Locations (Refer to Section 4.9).....	16
<b>2.2 Submittal Data Files</b> .....	16
<b>2.3 Types of Submissions</b> .....	17
2.3.1 ESRI® Geodatabase.....	17
2.3.2 ESRI® <sup>1</sup> Shapefile .....	17
2.3.3 Microsoft® Access .....	18
2.3.4 Microsoft® <sup>2</sup> Excel .....	18
2.3.5 ASCII Text File.....	18
2.3.6 File Naming Conventions .....	18
<b>2.4 Submittal Request</b> .....	19
2.4.1 Submittal Checklist.....	19
2.4.1.1 Tabular Data.....	19
2.4.1.2 Geospatial Data.....	19
2.4.1.3 All Submission Data.....	20
2.4.2 Submitting the Data .....	20
3. Wireline Data Standards.....	24
3.1 Submittal of Broadband Data for Individual Street Addresses.....	24
3.2 Submittal of Broadband Data by Road Segments in Areas Where Census Blocks Are Greater Than 2 Square Miles .....	25
3.3 Submittal of Broadband Information for Census Blocks No Greater Than 2 Square Miles .....	27

3.4	Submittal of Residential Broadband Service Speeds in the Provider’s Service Area -- Service Overview (Optional) .....	28
3.5	Submittal of Broadband Middle-mile and Backbone Interconnection Points .....	29
3.6	Submittal of Broadband Last Mile Connection Points (Optional) .....	30
3.7	Submittal of Community Anchor Institutions Served by Broadband Provider .....	30
3.8	Submittal of Wireline Broadband Services Not Provided to a Specific Address (Optional) .....	32
4.	Wireless Data Standards .....	34
4.1	Submittal of Broadband Data for Individual Street Addresses .....	34
4.2	Submittal of Broadband Data by Road Segments in Areas Where Census Blocks Are Greater Than 2 Square Miles .....	35
4.3	Submittal of Broadband Information for Census Blocks No Greater Than 2 Square Miles .....	37
4.4	Submittal of Residential Broadband Service Speeds in the Provider’s Service Area -- Service Overview .....	38
4.5	Submittal of Broadband Middle-mile and Backbone Interconnection Points .....	39
4.6	Submittal of Broadband Last Mile Connection Points (Optional) .....	40
4.7	Submittal of Community Anchor Institutions Served by Broadband Provider .....	40
4.8	Submittal of Wireless Broadband Services Not Provided to a Specific Address .....	42
4.9	Submittal of Wireless WISP Antenna features (Fixed Wireless Providers Only) .....	43
Appendix A – Code Tables .....		45
A-1	Technology of Transmission .....	45
A-2	Categories of End Users .....	45
A-3	Speed Tiers .....	46
A-4	Valid Speed Tiers per Technology .....	46
A-5	Louisiana Parish FIPS Codes .....	47
Appendix B – Metadata Template .....		47
Appendix C – Letter of Transmittal .....		48

# Glossary

**Address** - A designation of the location of a person's residence or workplace, an organization, or a building, consisting of numerical and text elements such as a street number, street name, and city arranged in a standard format. It excludes P.O. Boxes or mail drops which are not associated with the location of broadband service.

**Attribute** – Data or information contained within a database field.

**Available** - A broadband service provider does, or could, within a typical service interval (7 to 10 business days) without an extraordinary commitment of resources, provision two-way data transmission to and from the Internet with advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to the end user at the address.

**Broadband** - Data transmission technology that provides two-way data transmission to and from the Internet with advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users, or providing sufficient capacity in a middle mile project to support the provision of broadband service to end users within the project area.

**Community Anchor Institution** - Schools, libraries, medical and healthcare providers, public safety entities, community colleges and other institutions of higher learning, and other community support organizations and entities.

**Data** - Statistics, figures, descriptions, maps, geographic coordinates, or other such information relating to the provision of broadband services as specified in Sections 3 and 4, Data Standards, of this document and the NOFA Technical Appendix A.

**Downstream** – The transfer speed by which data can be sent from a server to a client. Analogous to the more commonly used term, download speed.

**End User** - A residential or business entity, institution, state or local government organization, including a Community Anchor Institution, that may use broadband service from a Provider (as defined below) for its own purposes and does not resell such service to other entities or incorporate such service into retail Internet-access services. Internet Service Providers (ISPs) are not “end users” for this purpose.

**Facilities-Based Service** - An entity is a “facilities-based” provider of broadband service connections to end user locations if any of the following conditions are met: (1) it owns the portion of the physical facility that terminates at the end user location; (2) it obtains unbundled network elements (UNEs), special access lines, or other leased facilities that terminate at the

end user location and provisions/equips them as broadband; or (3) it provisions/equips a broadband wireless channel to the end user location over licensed or unlicensed spectrum.

**Feature** – In a geographic information system (GIS), a geographical feature is expressed as a geometrical shape (points, lines, and polygons).

**FTP** – Acronym for File Transfer Protocol (FTP). It allows you to transfer files between two computers on the Internet.

**GIS** - Acronym for Geographic Information System. An integrated collection of computer software and data used to view and manage information about geographic places, analyze spatial relationships, and model spatial processes. A GIS provides a framework for gathering and organizing spatial data and related information so that it can be displayed and analyzed.

**Last-Mile** - “Last-mile” connection points consist of facilities used to provide broadband service between end-user (including residences, businesses, community anchor institutions, etc.) equipment and the appropriate access point, router or first significant aggregation point in the broadband network. Examples of such facilities include, among other things:

- for broadband service provided by incumbent local exchange carriers (ILEC), connections between end users and the central office or remote terminal.
- for cable modem service, connections between end users and the cable headend or fiber node.
- for wireless broadband service, connections between the wireless end-user device or customer premises equipment (CPE) and the wireless tower or base station
- for WiFi broadband service, connections between end users and the WiFi access point.
- the analogous portion of the facilities of other providers of broadband services.

The first points of aggregation in this context are therefore the central office, remote terminal, cable headend, wireless tower or base station, or similar points of aggregation.

**Metadata** - Information that describes the content, quality, condition, origin, and other characteristics of data or other pieces of information. Metadata for spatial data may describe and document its subject matter; how, when, where, and by whom the data was collected; availability and distribution information; its projection, scale, resolution, and accuracy; and its reliability with regard to some standard. Metadata consists of properties and documentation. Properties are derived from the data source (for example, the coordinate system and projection of the data), while documentation is entered by a person (for example, keywords used to describe the data).

**Metropolitan Statistical Area** - Metropolitan and micropolitan statistical areas (metro and micro areas) are geographic entities defined by the U.S. Office of Management and Budget



(OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. The term "Core Based Statistical Area" (CBSA) is a collective term for both metro and micro areas. A metro area contains a core urban area of 50,000 or more population, and a micro area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

**Micropolitan Statistical Area** – Any area which falls outside of the definition of a Metropolitan Statistical Area. (Formerly known as Rural Statistical Area)

**Middle-mile and Backbone Interconnection Points** - Middle-mile and backbone interconnection points typically enable relatively fast data rates, are built to handle substantial capacities, and may be service-quality assured. Examples might include:

- points of interconnection enabling communications between an incumbent local exchange carrier central office and the Internet
- between a cable aggregation point (headend) and the Internet
- between a wireless base station and the provider's core network elements that connect to other networks including the internet

**NTIA** - The National Telecommunications and Information Administration at the U.S. Department of Commerce.

**Provider** - In the context of this document, this is a supplier or source of broadband service.

**Record** – A database record is one complete set of fields (a field is a single piece of database information).

**Recovery Act** - The American Recovery and Reinvestment Act of 2009, Public Law 111-5.

**Service Area** – The region that encompasses all potential customers in which a Provider can legally provide service to.

**TIGER/Line File** - TIGER/Line files are extracts containing selected geographic and cartographic information from the Census Bureau's MAF/TIGER® (Master Address File / Topologically Integrated Geographic Encoding and Referencing) database. The MAF/TIGER database was developed at the Census Bureau to support a variety of geographic programs and operations including functions such as mapping, geocoding, and geographic reference files that are used in decennial and economic censuses and sample survey programs. Spatial data for geographic features such as roads, railroads, rivers, and lakes, as well as legal and statistical geographic areas are included in the product. Other information about these features, such as the name,

the type of feature, address ranges, and the geographic relationship to other features, also are included. The TIGER/Line files are made available to the public for no charge and are typically used to provide the digital map base for a Geographic Information System or for mapping software.

**Upstream** - The transfer speed by which data can be sent from a client to a server. Important for end users that need to send data to the internet via an application such as a Web Server. Analogous to the more commonly used term, upload speed.

# 1. Introduction

## 1.1 Background

The American Recovery and Reinvestment Act of 2009 (Recovery Act) was signed into law by President Obama on February 17th, 2009. The Federal Communications Commission (FCC) is currently working in coordination with the National Telecommunications and Information Administration (NTIA) to perform the FCC's role under the Recovery Act. Specifically, in conjunction with the Broadband Technology Opportunities Program established by the Act, the FCC has been tasked with creating a National Broadband Plan. The Recovery Act states that the National Broadband Plan shall seek to ensure all people of the United States have access to broadband capability and shall establish benchmarks for meeting that goal.

A primary goal of the Program, as mandated by section 6001(l) of the Recovery Act, is to develop and maintain a comprehensive, interactive, and searchable nationwide inventory map of existing broadband service capability and availability in the United States that depicts the geographic extent to which broadband service capability is deployed and available from a commercial or public provider throughout each state. Furthermore, Division A of the Recovery Act authorizes funds for the development and maintenance of the national broadband map. The Broadband Data Improvement Act (BDIA) directs the establishment of the State Broadband Data and Development Grant Program and the award of competitive grants to eligible state entities for the development and implementation of statewide initiatives to identify and track the availability and adoption of broadband services within each State.

### What is Broadband?

The NTIA describes broadband service as either commercial or non-commercial distribution of data transmission technology that provides two-way data transmission to and from the Internet with advertised speeds of at least 768 kilobits per second (kbps) downstream and greater than 200 kbps upstream to end users.

Any Provider receiving an official request for broadband mapping data that believes they are not a Broadband provider as defined by the above NTIA thresholds are asked to please indicate so by responding to the contacts indicated in Section 1.4.

## 1.2 Regulatory Requirements

Please see the Technical Appendix of the State Broadband Data and Development Notice of Funds Availability (NOFA) (RIN 0660-ZA29) and subsequent clarifications as published by NTIA, which can be downloaded from the internet at [www.broadbandusa.gov](http://www.broadbandusa.gov).



Providers should read the requirements and thresholds carefully and contact Baker by voice, e-mail or letter (contact information in Section 1.4) within 10 business days if they believe they are not a broadband provider as defined above.

## 1.3 About the Guidelines

These guidelines were developed by Michael Baker, Jr., Inc. (Baker), on behalf of the State of Louisiana, Office of Information Technology and are being provided to each Broadband Service Provider to facilitate the submission of Provider data for the Louisiana Broadband Mapping Project. The guidelines provide a range of options and formats for the submission of the required data. If data cannot be provided in the format(s) specified in this guideline, please contact Baker by voice, e-mail or letter (contact information in Section 1.4) within 10 business days. Baker will work with Provider to facilitate your data submission. If desired, a Non-Disclosure Agreements (NDA) may be considered between the Broadband Service Provider and Baker prior to data submission but will not be any more restrictive than those provisions outlined in Section V.B Definitions of the NOFA.

## 1.4 Contacts

### **Michael Baker Jr., Inc.**

5757 Corporate Blvd., Suite 200  
Baton Rouge, LA 70808

#### **Primary**

Vicki Munn, Louisiana Provider Outreach Contact  
[vmunn@mbakercorp.com](mailto:vmunn@mbakercorp.com)  
225-923-8385

#### **Secondary**

Ken Morales, P.E., Project Manager  
[kwmorales@mbakercorp.com](mailto:kwmorales@mbakercorp.com)  
225-218-2831

#### **Technical**

Bob Henry  
[bhenry@mbakercorp.com](mailto:bhenry@mbakercorp.com)  
281-586-5351

## 2. Data Submission Guidelines

### 2.1 Requested Data

- All wireline and wireless facilities-based providers of broadband service available to end users are requested to submit their electronic data, bi-annually, to Baker in accordance with these guidelines. Broadband service is “available” at an address if the provider does, or could, within a typical service interval (7 to 10 business days) without an extraordinary commitment of resources, provision two-way data transmission to and from the Internet with advertised speeds to end users of:
  - at least 768 kbps downstream and
  - greater than 200 kbps upstream
- To assist the Broadband Service Provider in preparing their service data, the following datasets can be obtained from Baker at <http://www.broadband.la.gov>. This information is public information, free of charge, and without license, restrictions, or warranty.
  - 2010 TIGER Streets Census, MSA and County Data (ESRI Shapefile)  
Statewide files are prefixed with: tl\_2010\_22\_.....  
County files are prefixed with: tl\_2010\_22XXX.... (XXX=Parish FIPS Code)
    - Addr.dbf – Address Ranges Relationship File Record Layout
    - Addrfn.dbf - Address Range-Feature Name Relationship File Record Layout
    - Bg00.shp – Census Block Group State-based Shapefile
    - Cbsa.shp – Metropolitan/Micropolitan Statistical Areas (MSA)
    - Cousub.shp - County Subdivision State-based Shapefile
    - Streets.shp – Street Centerlines
    - Faces.shp - Topological Faces (Polygons With All Geocodes) Shapefile Record Layout
    - Featnames.dbf - Feature Names Relationship File
    - Otherid.dbf - Other Identifiers Relationship File
    - Tabblock10.shp – Census Block State-based Shapefile
    - Tract00.shp - Census Tract State-based Shapefile
  - Data Submittal Database, Shapefile and Spreadsheet Templates. Please note that there are separate templates for Wireline and Wireless Providers. Each template will have a designation identifying the Provider Type:
    - Personal GDB – Louisiana\_Broadband\_ProviderType\_Template.mdb
    - File GDB – Louisiana\_Broadband\_ProviderType\_Template.gdb
    - Louisiana\_Broadband\_ProviderType\_Template.xls
    - Microsoft Access –  
Louisiana\_Broadband\_ProviderType\_Template\_Access.mdb
  - Each of the above Templates contain the following required feature classes, tables, worksheets, with the exception of Nom\_Speed which is not included in the Wireline templates:
    - BB\_Service\_Address (Broadband Data for Individual Street Address)

- BB\_Service\_CensusBlock (Broadband Data for Census Blocks)
- BB\_Service\_CAIstitutions (Broadband Community Anchor Institutions)
- BB\_ConnectionPoint\_LastMile (Broadband Last Mile Connection Points)
- BB\_ConnectionPoint\_MiddleMile (Broadband Middle-mile and Backbone Interconnection Points)
- BB\_Service\_Overview (Service Area Overview with Subscriber-Weighted Nominal Speed Data)
- BB\_Service\_Wired\_Area (Wireline Broadband Services Not Provided to a Specific Address)
- BB\_Service\_Wireless (Wireless Broadband Services Not Provided to a Specific Address)
- BB\_Service\_RoadSegment (Broadband Data by Road Segment)
- WISP\_Antenna (Fixed Wireless Antenna points)
- Metadata xml Templates:
  - BB\_ConnectionPoint\_LastMile.xml
  - BB\_ConnectionPoint\_MiddleMile.xml
  - BB\_Service\_Address.xml
  - BB\_Service\_CAIstitutions.xml
  - BB\_Service\_CensusBlock.xml
  - BB\_Service\_Overview.xml
  - BB\_Service\_RoadSegment.xml
  - BB\_Service\_Wired\_Area.xml
  - BB\_Service\_Wireless.xml
- Submission Guidelines
- Letter of Transmittal
- The initial data submittal to be provided to Baker was to be current as of or later than June 30, 2009, and be submitted as soon as possible, on or before February 28, 2010. See Section 2.4 - Submittal Request, for submittal requirements and Appendix C for a Letter of Transmittal. The Letter of Transmittal can also be downloaded at <http://www.broadband.la.gov>.
- After that initial data submittal, bi-annual data update submittals are to be provided to Baker. Updates should be submitted by July 30<sup>th</sup> (current as of June 30<sup>th</sup>) and by January 30<sup>th</sup> (current as of December 31<sup>st</sup>). The final bi-annual update required from Providers is currently January 30<sup>th</sup>, 2014.
- Generally, the following information is being requested and is further detailed in the subsequent sections:
  - Broadband Service Availability Data – Wireline and Wireless.
  - Residential Broadband Service Speed in the Provider’s Service Area
  - Broadband Service Infrastructure –Middle Mile/Backbone Interconnection, and optionally, Last Mile Connection Points
  - Community Anchor Institutions Served

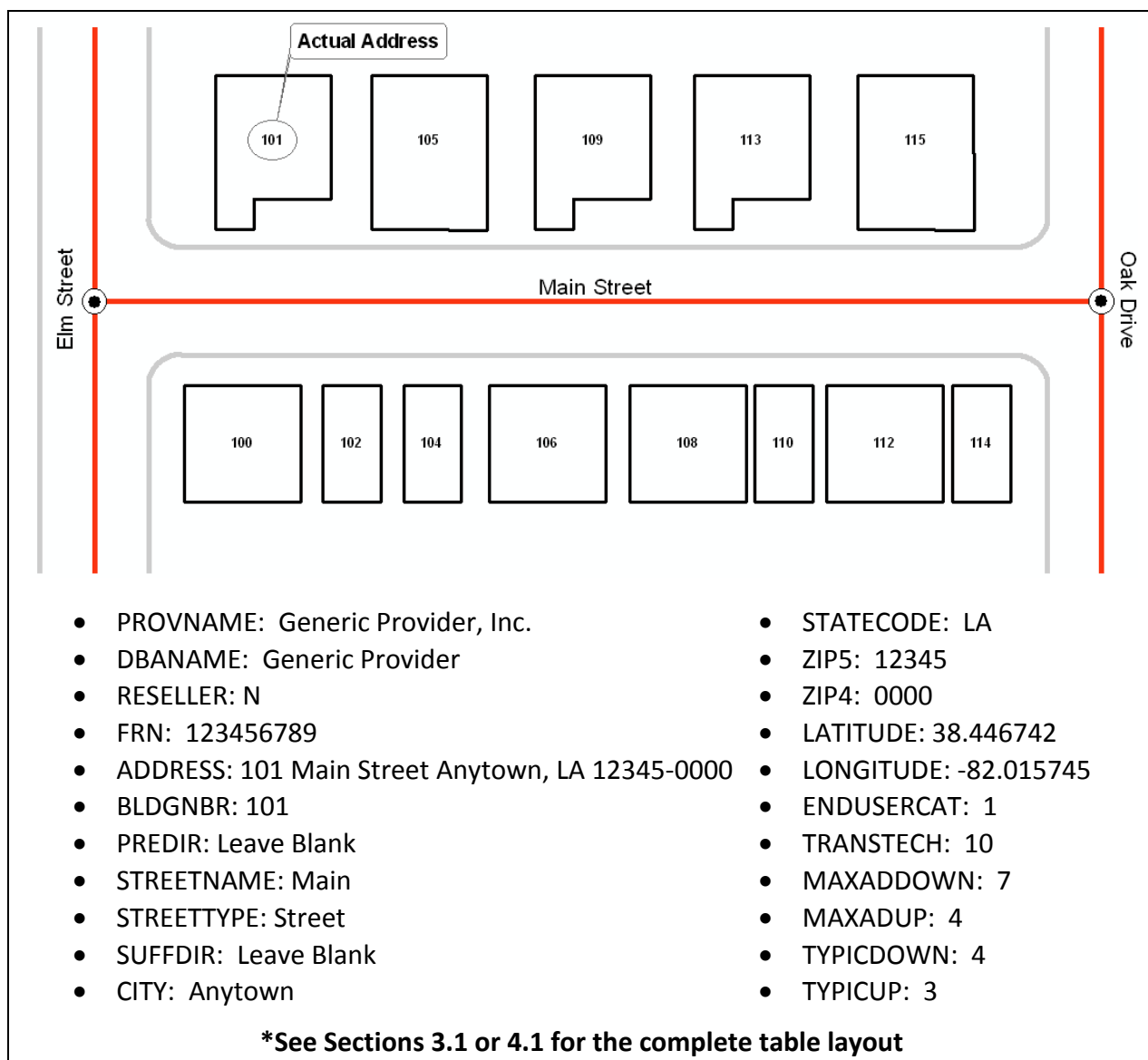
- The detailed submission formats are defined in Section 3 and 4 (Data Standards) of this document. Section 3 are standards for wireline providers. Section 4 are standards for wireless providers.

### **2.1.1 Broadband Service Availability in the Provider's Service Area** **(Refer to Sections 3.1, 3.2, 3.3, 3.4, 3.8, 4.1, 4.2, 4.3, 4.4, & 4.8)**

Each wireline and wireless facilities-based provider of broadband service to end-users should provide Baker with their broadband service availability data as defined in Section 2.3. The following are the preferred data submittal format priorities:

#### **2.1.1.1 Individual Street Address**

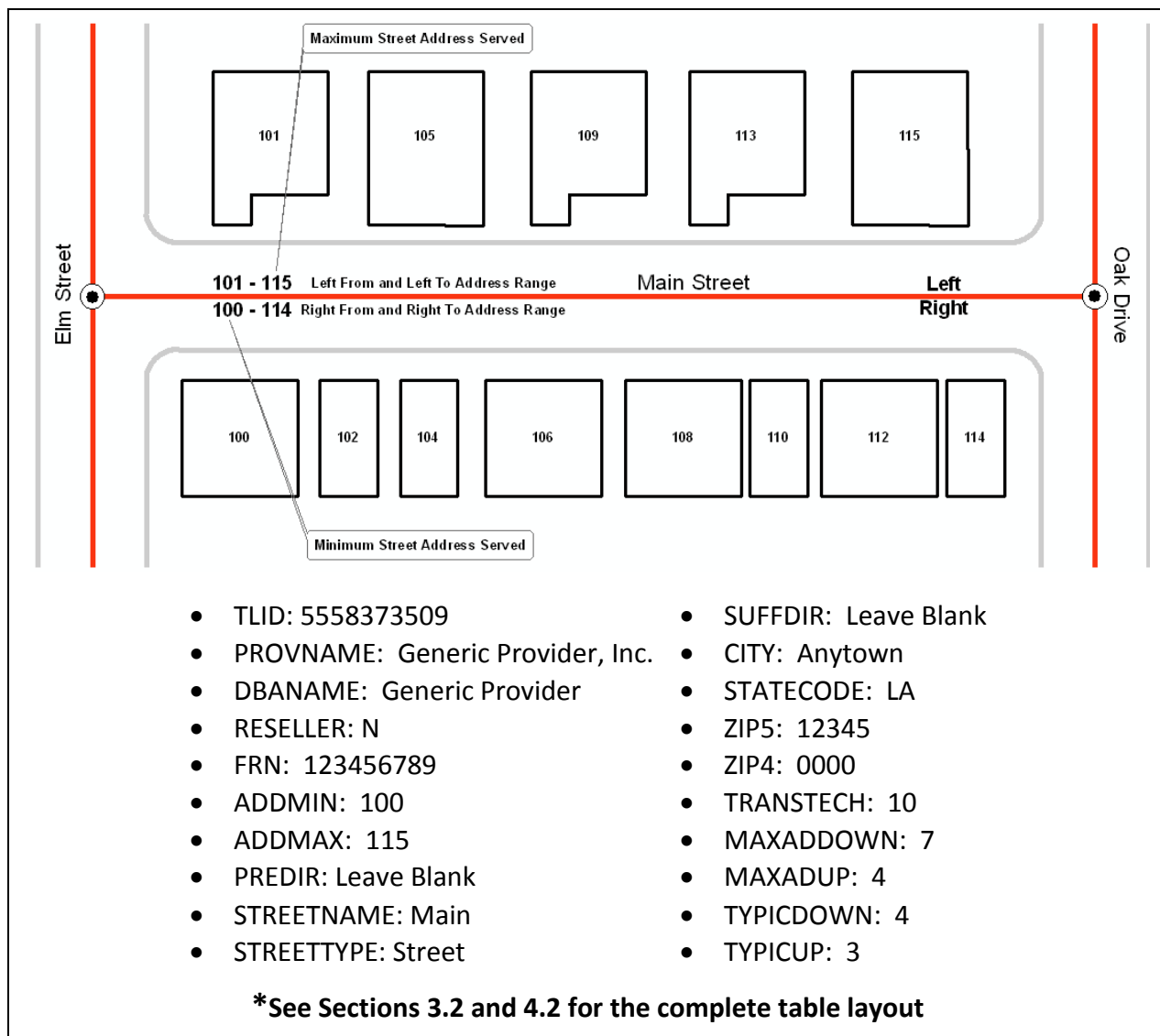
Individual street addresses represented as 911 addresses or Lat/Long coordinates in an electronic format (geospatial or tabular as defined in Section 2.3) at which broadband service is available to end users, along with the associated service characteristics. For the record illustrated below the individual street address information should be provided as follows:



**Figure 1: Individual Street Address Example**

### 2.1.1.2 Street Segment Address Range

If individual addresses (preceding paragraph 2.1.1.1) cannot be provided, street segment data containing the street name and **the specific address ranges along the respective street segment record** that are served in an electronic format (geospatial or tabular as defined in Section 2.3). The submitted data must conform to the U.S. Census Bureau's TIGER/Line file. The street segment data is required for every street in the areas in which broadband service is available to end users. Associated service characteristics is also required. The illustration below shows street address information that should be provided based on the directionality of the road segment:



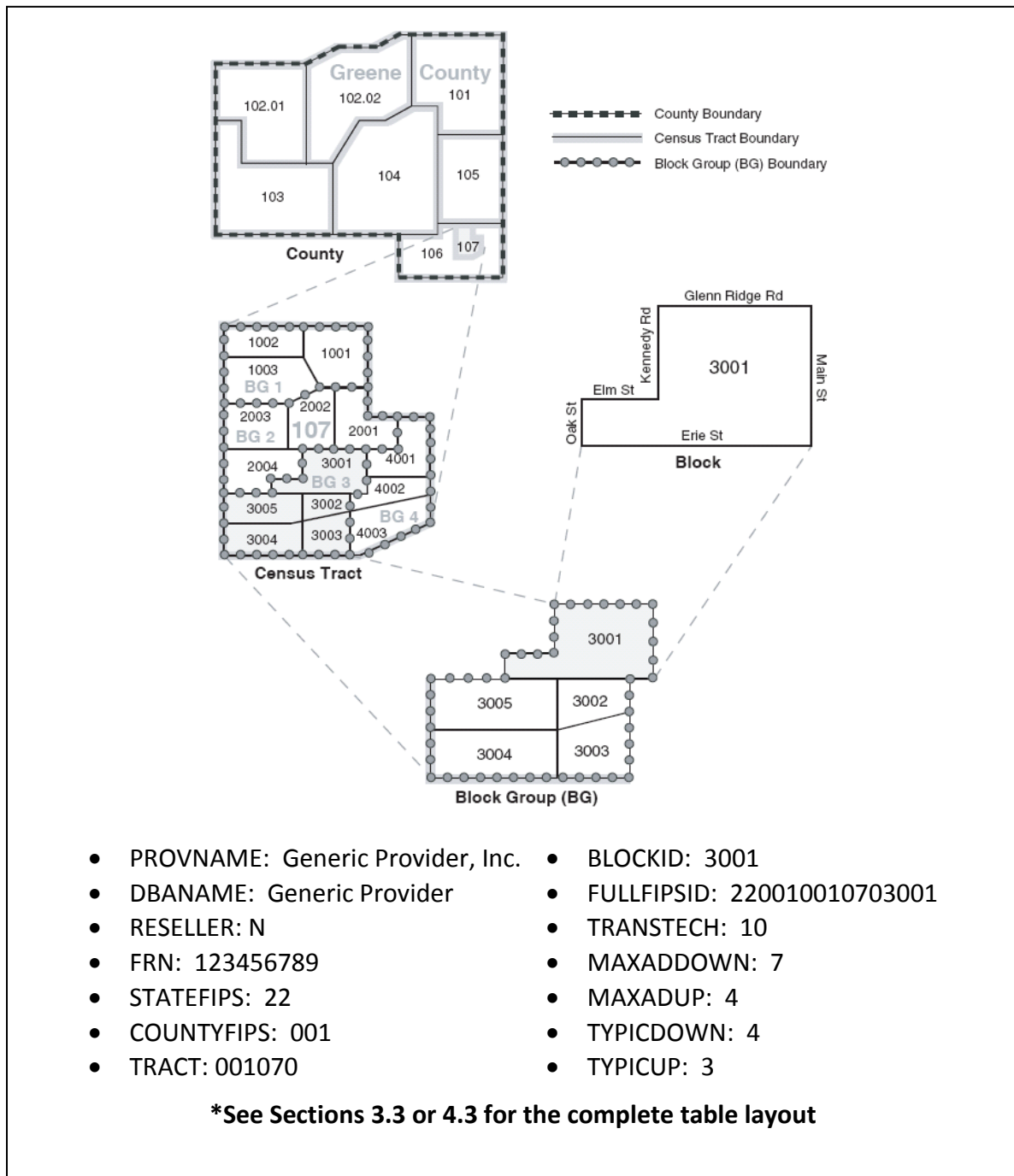
**Figure 2: Street Segment Address Range Served**

### 2.1.1.3 US Census Block Served

If individual addresses (preceding paragraph 2.1.1.1) or street segment data (preceding paragraph 2.1.1.2) cannot be provided, US Census Blocks served in an electronic format (geospatial or tabular as defined in Section 2.3) in which broadband service is available to end users, along with the associated service characteristics. **PLEASE NOTE: If any Provider customers reside within a Census Block where Broadband coverage is not available for the entire Census Block, then either a polygon representation of only the served portion of the Census Block should be shown in the data submittal, or it should be noted appropriately in any non-graphic submittal.** It is common for houses on the opposite sides of a street to be within separate Census Blocks. In the example shown below, the various Census divisions from



the Tract to the Block level have been illustrated. For the purposes of the example below, the Tract will be assumed to reside within Acadia Parish, Louisiana:



**Figure 3: US Census Block Served Example**

#### **2.1.1.4 Services not Identified by a Specific Address (Refer to Section 3.8 & 4.8)**

If individual addresses (preceding paragraph 2.1.1.1), street segments (preceding paragraph 2.1.1.2), or census block data (preceding paragraph 2.1.1.3) cannot be provided, information

pertaining to Broadband service or local franchise area, by a delineated boundary on a map, may be provided in electronic format (geospatial or tabular as defined in Section 2.3).

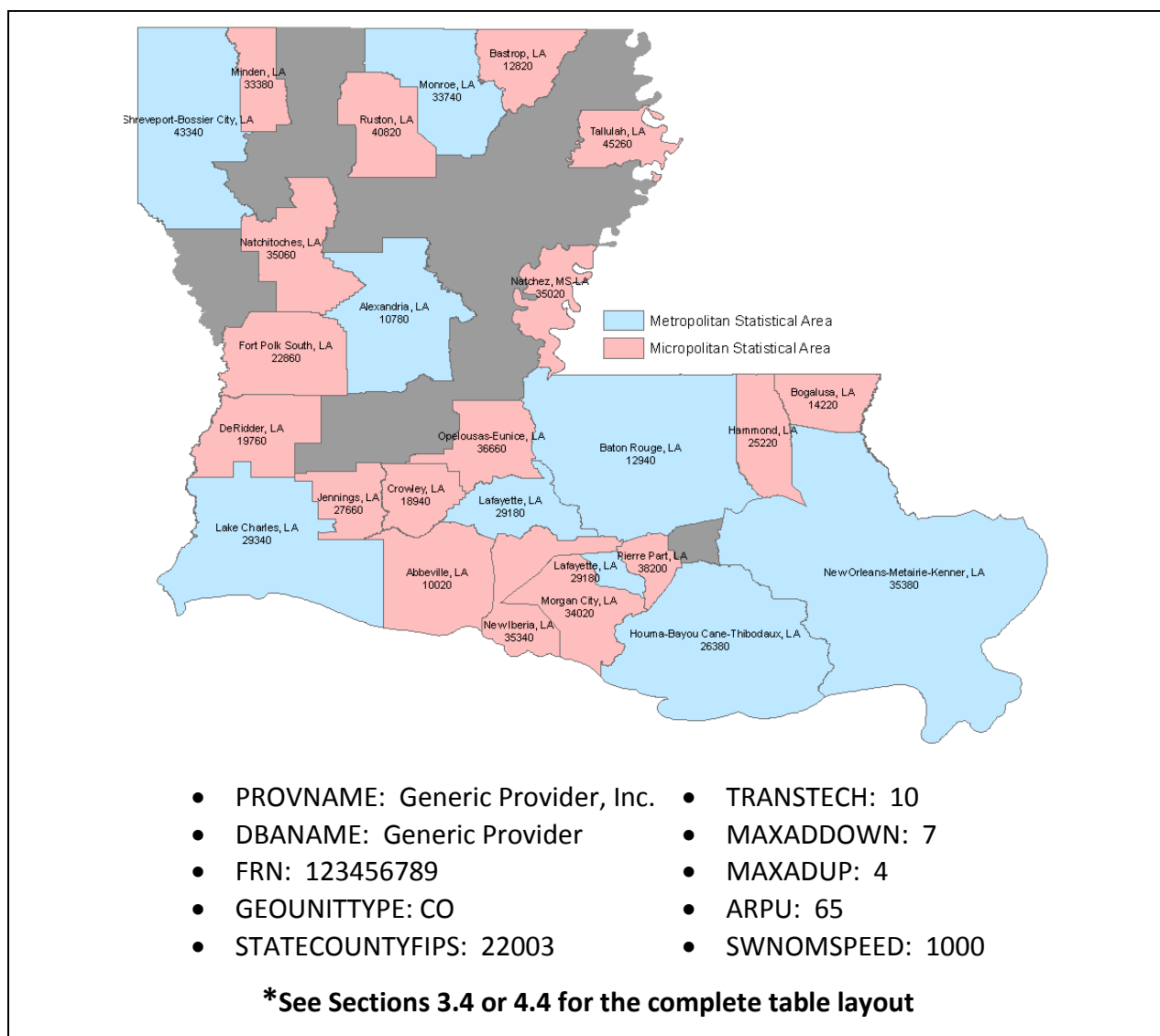
This can be satisfied if each area indicates the subscriber broadband service authorized maximum downstream and upstream speed available.

• PROVNAME: Generic Provider, Inc.	• <i>SPECTRUM (Wireless Only): 1</i>
• DBANAME: Generic Provider	• MAXADDOWN: 7
• RESELLER: N	• MAXADUP: 4
• FRN: 123456789	• TYPICDOWN: 4
• TRANSTECH: 80	• TYPICUP: 3
<b>*See Section 4.8 for the complete table layout</b>	

**Figure 4:** Services not Provided to a Specific Address Example

#### 2.1.1.5 Service Overview

If individual addresses (preceding paragraph 2.1.1.1), street segments (preceding paragraph 2.1.1.2), census block data (preceding paragraph 2.1.1.3), or services not identified by a specific address (preceding paragraph 2.1.1.4) cannot be provided, information pertaining to Broadband service or local franchise area, by Metropolitan or Micropolitan Statistical Area, may be provided in electronic format (geospatial or tabular as defined in Section 2.3). The example below illustrates the existing Metropolitan Statistical Areas within the State of Louisiana. For this example, the Provider provides services within the Baton Rouge MSA and should be recorded within the submission with the following information:



**Figure 5: Service Overview Example**

### 2.1.2 Middle-mile and Backbone Interconnection Points (Refer to Sections 3.5 & 4.5)

Providers must supply Baker with a list of interconnection points, along with the associated information described below, of facilities in their service area that provides connectivity with:

- A service provider's network elements (or segments) or
- Between a service provider's network and another provider's network, including the Internet backbone.

Collectively, (a) and (b) are "middle-mile and backbone interconnection points".

Examples might include:

- Points of interconnection enabling communications between an incumbent local exchange carrier (ILEC) central office and the Internet;
- Between a cable aggregation point (headend) and the Internet; or
- Between a wireless base station and the provider’s core network elements that connect to other networks including the Internet.

<ul style="list-style-type: none"> <li>• PROVNAME: Generic Provider, Inc.</li> <li>• DBANAME: Generic Provider</li> <li>• FRN: 123456789</li> <li>• OWNERSHIP: 0</li> <li>• BHCAPACITY: 2</li> <li>• BHTYPE: 1</li> </ul>	<ul style="list-style-type: none"> <li>• LATITUDE: 37.407229</li> <li>• LONGITUDE: -122.107162</li> <li>• ELEVFEET: 25.63</li> <li>• STATEABBR: LA</li> <li>• FULLFIPSID: 220010010703001</li> </ul>
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**\*See Sections 3.5 & 4.5 for the complete table layout**

**Figure 7:** Middle-mile and Backbone Interconnection Points Example

### 2.1.3 Community Anchor Institutions (Refer to Sections 3.7 & 4.7)

Providers need to provide Baker with a list of community anchor institutions to which they provide broadband service in their service area, along with the associated information described in Sections 3 and 4 (Data Standards).

<ul style="list-style-type: none"> <li>• ANCHORNAME: Any High School</li> <li>• ADDRESS: 222 High School Drive South, Anytown, LA 12345-0000</li> <li>• BLDGNBR: 222</li> <li>• PREDIR: Leave Blank</li> <li>• STREETNAME: High School</li> <li>• STREETTYPE: Drive</li> <li>• SUFFDIR: South</li> <li>• CITY: Anytown</li> <li>• STATECODE: LA</li> <li>• ZIP5: 12345</li> </ul>	<ul style="list-style-type: none"> <li>• ZIP4: 0000</li> <li>• LATITUDE: 37.407229</li> <li>• LONGITUDE: -122.107162</li> <li>• CAICAT: 1</li> <li>• BBSERVICE: Y</li> <li>• TRANSTECH: 50</li> <li>• SUBSCRBDOWN: 5</li> <li>• SUBSCRBUP: 3</li> <li>• FULLFIPSID: 220010010703001</li> </ul>
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**\*See Sections 3.7 & 4.7 for the complete table layout**

**Figure 8:** Community Anchor Institutions Example

### 2.1.4 Last Mile Connection Points (Optional) (Refer to Sections 3.6 & 4.6)

Providers are requested to provide Baker with a list of last-mile connection points in their service area, along with the associated information described below.

<ul style="list-style-type: none"><li>• PROVNAME: Generic Provider, Inc.</li><li>• DBANAME: Generic Provider</li><li>• FRN: 123456789</li><li>• TRANSTECH: 10</li><li>• BHCAPACITY: 3</li><li>• BHTYPE: 3</li></ul>	<ul style="list-style-type: none"><li>• NBRSERVED: 68253</li><li>• LATITUDE: 37.407229</li><li>• LONGITUDE: -122.107162</li><li>• ELEVFEET: 25.63</li><li>• STATEABBR: LA</li></ul>
<p><b>*See Sections 3.6 &amp; 4.6 for the complete table layout</b></p>	

**Figure 9:** Last Mile Connection Points Example

### 2.1.5 WISP Antenna Locations (Refer to Section 4.9)

Providers are requested to provide Baker with a list of WISP Antenna in their service area, along with the associated information described below.

<ul style="list-style-type: none"><li>• PROVNAME: Generic Provider, Inc.</li><li>• DBANAME: Generic Provider</li><li>• FRN: 123456789</li><li>• SITE_NAME: Bird Mtn.</li><li>• LATITUDE: 37.407229</li><li>• LONGITUDE: -122.107162</li><li>• ANT_HEIGHT: 75</li><li>• TRANS_MAKE:</li><li>• TRANS_MODEL:</li><li>• RADIUS: 3</li><li>• TRANS_ERP: 33.85</li><li>• AZIMUTH:</li></ul>	<ul style="list-style-type: none"><li>• FREQUENCY: 900</li><li>• ANT_GAIN: 14</li><li>• ANT_MAKE: Ubiquiti</li><li>• ANT_MODEL:</li><li>• SUB_HEIGHT:</li><li>• SUB_GAIN:</li><li>• SUB_RS: Ubiquiti</li><li>• MAXADDOWN: 5</li><li>• MAXADUP: 2</li><li>• TYPICDOWN: 4</li><li>• TYPICUP: 2</li><li>•</li></ul>
<p><b>*See Section 4.9 for the complete table layout</b></p>	

**Figure 10:** WISP Antenna Locations Example

## 2.2 Submittal Data Files

Broadband Service Providers must submit the following data files as previously defined in Section 2.1

- Broadband Service Availability Data  
Providers must submit all broadband availability data in one or more of the following files (listed in preferred submittal preference):

1. Street Addresses \*
  2. Street Segments
  3. US Census Bureau Blocks
  4. Services not identified by Addresses
  5. Service Overview
- Residential Broadband Service Speed Data
  - Broadband Service Infrastructure Data
    - Middle-mile and Backbone Interconnection Points
    - Optional Last Mile Connection Points
  - Community Anchor Institutions Data

\* The Provider is required to provide an explanation as to the reason for submittal of data other than the Priority 1, street address file requested above. Baker will uphold utmost confidentiality of the address or service location data as per the established NDA. Baker is also to communicate the explanation to the project stakeholders.

## 2.3 Types of Submissions

Providers are requested to submit their data in accordance with one of the following formats. The various formats of submissions are intended to provide enough flexibility for all providers to submit their information as quickly as possible with minimum effort. **NOTE: The type of submission should be identified in the transmittal letter accompanying the delivery.** The following are listed in the order of preference.

### 2.3.1 ESRI®<sup>1</sup> Geodatabase

A database or file structure used primarily to store, query, and manipulate spatial data. Geodatabases store geometry, a spatial reference system, attributes, and behavioral rules for data. Various types of geographic datasets can be collected within a geodatabase, including feature classes, attribute tables, raster datasets, network datasets, topologies, and many others. Acceptable ESRI formats include the Personal or File geodatabase.

### 2.3.2 ESRI®<sup>1</sup> Shapefile

A vector data storage format for storing the location, shape, and attributes of geographic features. A shapefile is stored in a set of related files and contains one feature class. The ESRI shapefile is an industry standard that is capable of being imported or exported from most major GIS software platforms.

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<sup>1</sup> ESRI is a registered trademark of Environmental Systems Research Institute, Inc.



### 2.3.3 Microsoft<sup>2</sup> Access

Data may only be provided in Microsoft Access as either an ESRI® Personal Geodatabase or as tabular data with the same restrictions as a Microsoft Excel file.

### 2.3.4 Microsoft<sup>2</sup> Excel

Data may only be submitted in Microsoft Excel format when each individual record can be tied to a geographic location, such as the US Census Bureau's TIGER file format (utilizing the TLID attribute) or if each record has corresponding coordinate information.

### 2.3.5 ASCII Text File

ASCII-compliant text files may be submitted following the same specifications as Microsoft Excel files, and must be Bar ( | ) delimited.

Note: If none of the above electronic data is available, please contact Baker by voice, email, or letter (see Section 1.4 for contact information) within 10 business days or earlier, for support and guidance in the delivery of data.

### 2.3.6 File Naming Conventions

Data submittal files, as well as the individual component feature classes, shapefiles, Access tables, Excel worksheets or ASCII text files, shall adhere to the following naming conventions:

#### **Data Submittal File:**

- Filename = ProviderName\_FRN.file extension (zip, personal or file-based geodatabase, xls)
  - ProviderName = Name of the Broadband Provider Submitting Data
  - FRN = Provider FCC Registration Number

#### **Component Feature Classes, Shapefiles, Tables, Worksheets, or ASCII Text Files:**

- Individual Street Addresses (Section 3.1 and 4.1)  
Name = BB\_Service\_Address
- Road Segments (Section 3.2 and 4.2)  
Name = BB\_Service\_RoadSegment
- Census Blocks (Section 3.3 and 4.3)  
Name = BB\_Service\_CensusBlock
- Service Overview (Section 3.4 and 4.4)  
Name = BB\_Service\_Overview
- Middle Mile Interconnection Points (Section 3.5 and 4.5)

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<sup>2</sup> Microsoft Access and Microsoft Excel are registered trademarks of Microsoft Corporation in the United States and/or other countries.

Name = BB\_ConnectionPoint\_MiddleMile

- Community Anchor Institutions (Section 3.7 and 4.7)  
Name = BB\_Service\_CAIInstitutions
- Services Provided to Specific Address (Section 3.8 and 4.8)  
Name = BB\_Service\_Wired\_Area or BB\_Service\_Wireless
- Last Mile Connection Points (Section 3.6 and 4.6)  
Name = BB\_ConnectionPoint\_LastMile
- WISP Antenna Points (Section 4.9)  
Name = WISP\_Antenna

## 2.4 Submittal Request

All submittals should be accompanied by a transmittal letter. The transmittal letter provides Baker personnel with key information for processing the submission and allows for additional communication between Baker staff and the Provider. A transmittal letter template can be found in Appendix C of these Guidelines and can be downloaded at <http://www.broadband.la.gov>.

The following items should be included in the transmittal letter:

1. Contact information for a Provider representative that can answer questions regarding the data submittal and be reached during normal business hours (8 am – 5 pm Monday thru Friday (CST)).
2. A brief description of the submittal including the file type being submitted (along with any special instructions for accessing or using the data).

### 2.4.1 Submittal Checklist

Providers should use the following checklist to verify the data being submitted to Baker meets the standards and that all necessary information has been included.

#### 2.4.1.1 Tabular Data

- ✓ Have any attribute fields been left unpopulated that can be populated with Provider information?
- ✓ Does each database record have a unique link to a point, line or polygon in a geospatial file, Census block, Census street segment, or Census Metropolitan/ Micropolitan Statistical Area?
- ✓ Has the attribute data been provided and formatted according to these Guidelines?

#### 2.4.1.2 Geospatial Data

- ✓ Are the linear features continuous without gaps or overshoots (correct feature topology)?

- ✓ Has the database record been uniquely linked to the point, line or polygon feature (does every geographic feature have a database record)?
- ✓ Does each feature have a complete database record as defined in these Guidelines (no incomplete attribution)?
- ✓ If the attribute data is provided in a non-geographic format, has the file been exported according to these Guidelines?

#### **2.4.1.3 All Submission Data**

- ✓ Do the file names meet the naming conventions defined in these Guidelines?
- ✓ Do the files meet the formatting requirements as defined in these Guidelines?
- ✓ Are all files included for the Submittal Area?
- ✓ Is the contact information current and correct?
- ✓ Has all metadata information been formatted and submitted according to the requirements as defined in these Guidelines?

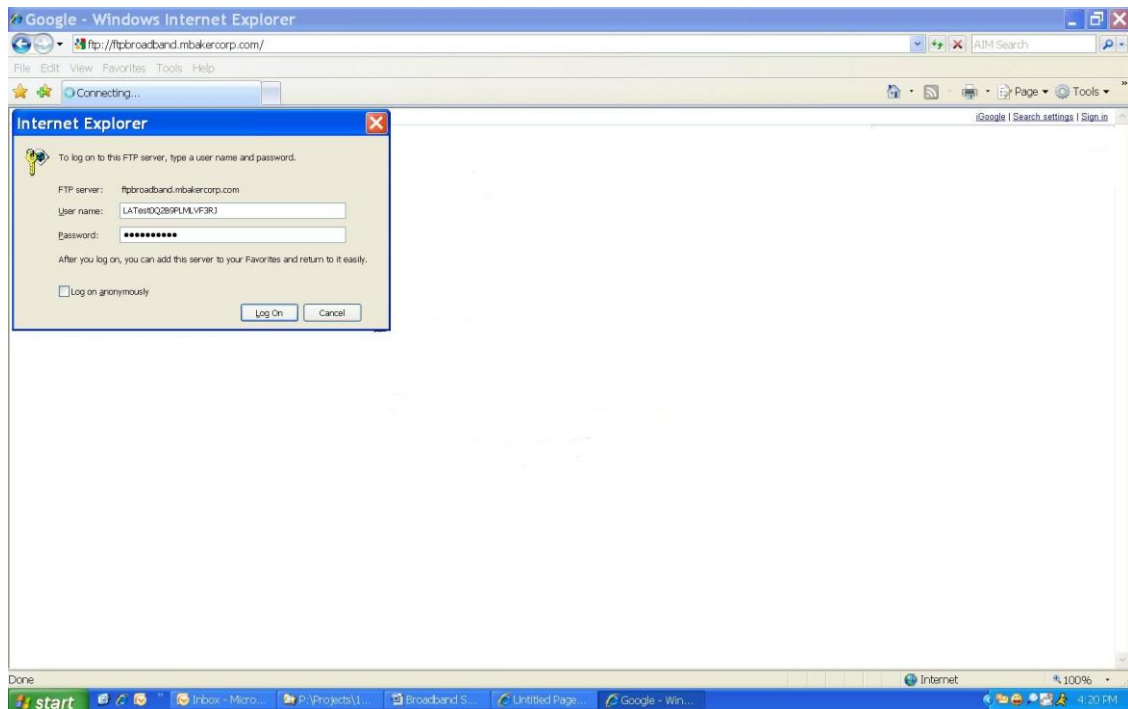
#### **2.4.2 Submitting the Data**

To send your data to Baker, perform the following steps:

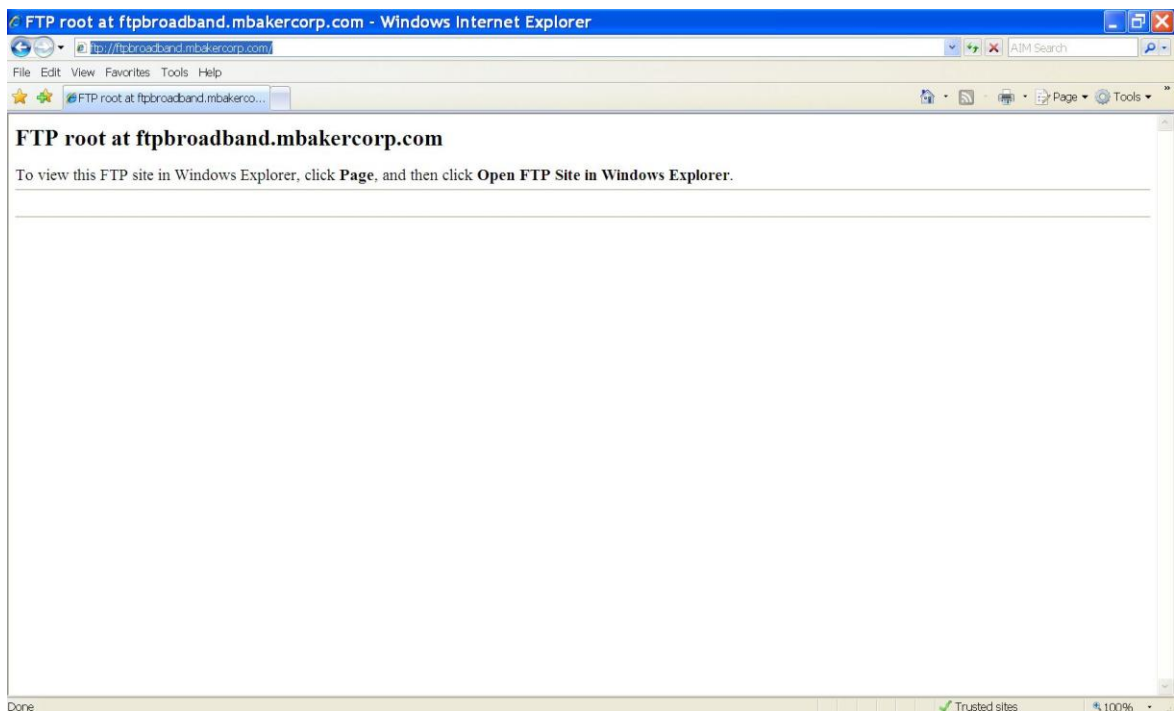
- Prepare the required transmittal letter according to these Guidelines (See Appendix C or you can download the Transmittal Letter at <http://www.broadband.la.gov>.)
- All digital files including geospatial data, tabular data and metadata will be submitted electronically to Baker via a secure FTP, <https://ftpbroadband.mbakercorp.com> or CDs and/or DVDs. Delivery media may be sent by mail or courier to the address provided in Section 1.4.
- For security reasons, each Provider is required to contact Vicki Munn to obtain a user name and password (see contact information in Section 1.4) for the secure FTP site.

Please follow the directions below to submit your Broadband data to the secure FTP site.

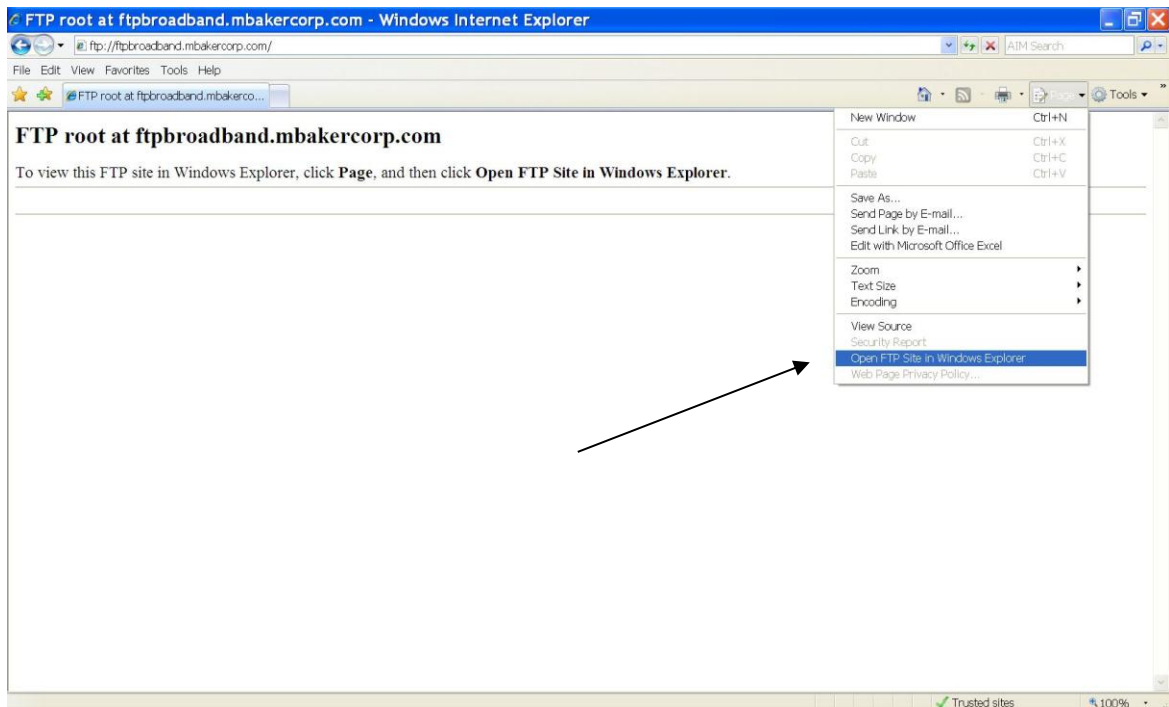
- i. After receiving the user name and password, open an Internet Explorer window (other browser applications may not work properly, i.e. Google Chrome, Firefox, Safari, etc.) and type ([ftpbroadband.mbakercorp.com](https://ftpbroadband.mbakercorp.com)) in the address line. A log-in window will automatically open, as shown below. Enter the user name and password in the appropriate boxes and click Log On.



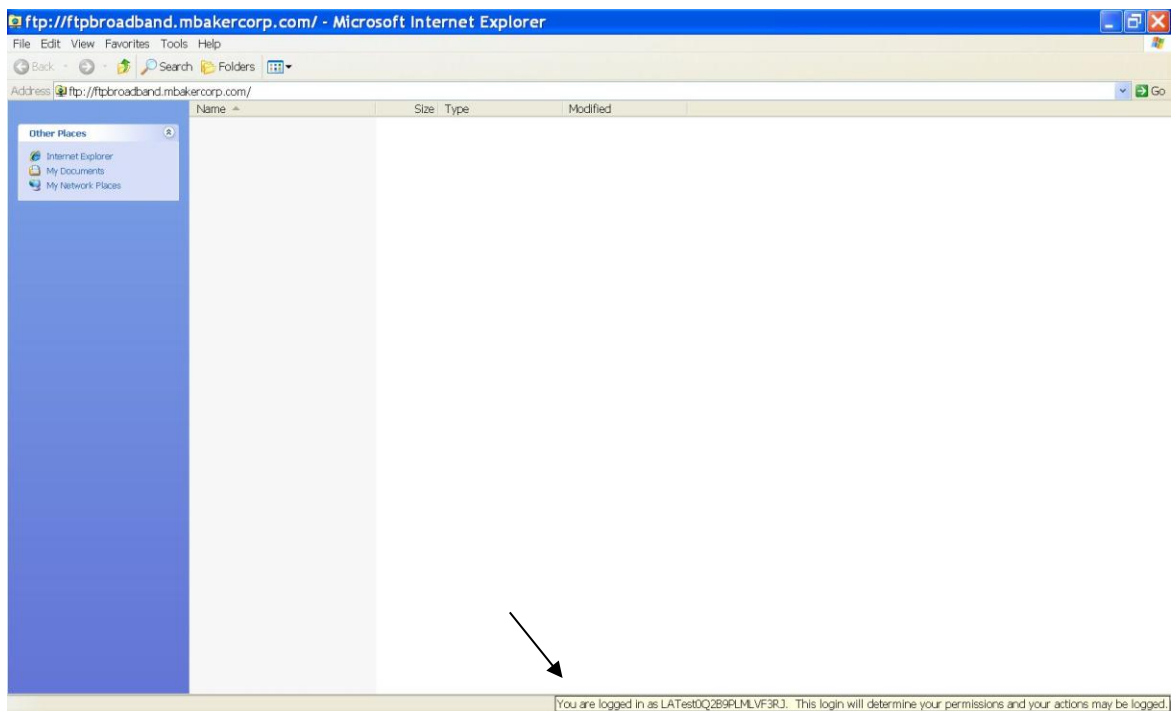
- ii. A new window will open with the message below.



- iii. On the right hand side of the screen, click on Page, next click on Open FTP Site in Windows Explorer (as shown below).



- iv. The following window will be opened. Note at the bottom right of the screen (see example below) the user that is logged in will be indicated. This window operates like any other explorer window. To submit your file, drag the file from its current location (i.e. server) and drop it into the window. Once the file has completed the transfer, it is considered submitted. A confirmation email will be sent to the person that requested the user name.



- v. To close your session, click the X in the upper right hand corner of the window or go to File and Close.



## 3. Wireline Data Standards

### 3.1 Submittal of Broadband Data for Individual Street Addresses

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider’s services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
ADDRESS	Complete Address	Text	100	101 Main Street Anytown, LA 12345-0000
BLDGNBR	Building Number	Text	10	101
PREDIR	Prefix Direction	Text	25	
STREETNAME	Street Name	Text	50	Main
STREETTYPE	Street Type	Text	25	Street
SUFFDIR	Suffix Direction	Text	25	
CITY	City	Text	50	Anytown
STATECODE	Two Letter State Abbreviation	Text	2	LA
ZIP5	5 digit Zipcode	Text	5	12345
ZIP4	4-digit add-on code (with leading zeros)	Text	4	0000
LATITUDE	Latitude in decimal degrees	Double		40.446742
LONGITUDE	Longitude in decimal degrees	Double		-80.015745
ENDUSERCAT	Category of End User Served at Address (see Appendix A-2 for codes)	Text	2	1
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for	Text	2	4

	applicable codes per Technology)			
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3
FULLFIPSID	Full Census Block ID	Text	16	

1. All fields are required and must contain a valid value unless not applicable for a particular record: i.e. street does not have a prefix direction, suffix direction, etc.
2. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
3. The ID field is a sequential integer ranging from 1 to the total number of addresses.
4. Address data fields should be space-delimited in standardized Postal Service Form. See <http://pe.usps.gov/cpim/ftp/pubs/Pub28/pub28.pdf>.
5. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
6. Categories of End Users should be entered as integers based on reference table A-2 in Appendix A.
7. Speed tiers should be entered as integers based on reference table A-3 in Appendix A.

### 3.2 Submittal of Broadband Data by Road Segments in Areas Where Census Blocks Are Greater Than 2 Square Miles

Field Name	Alias	Type	Length	Example
TLID	Census TIGER Permanent Feature Identifier	Text	15	6548143542
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider’s services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
ADDMIN	Minimum Address Range Served	Text	10	100
ADDMAX	Maximum Address Range Served	Text	10	115
PREDIR	Prefix Direction	Text	25	
STREETNAME	Street Name	Text	50	Main
STREETTYPE	Street Type	Text	25	Street
SUFFDIR	Suffix Direction	Text	25	
CITY	City	Text	50	Anytown

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
STATECODE	Two Letter State Abbreviation	Text	2	LA
ZIP5	5 digit Zipcode	Text	5	12345
ZIP4	4-digit add-on code (with leading zeros)	Text	4	0000
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. All fields are required and must contain a valid value unless not applicable for a particular record: i.e. street does not have a prefix direction, suffix direction, etc.
2. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
3. The ID field is a sequential integer ranging from 1 to the total number of road segments.
4. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
5. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.

### 3.3 Submittal of Broadband Information for Census Blocks No Greater Than 2 Square Miles

Field Name	Alias	Type	Length	Example
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	"Doing Business As" Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider's services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
STATEFIPS	"22" for all Records (Louisiana FIPS Code)	Text	2	22
COUNTYFIPS	County FIPS Code (see Appendix A-5 for Codes)	Text	3	001
TRACT	Census Tract	Text	6	001070
BLOCKID	Census Block	Text	4	3001
FULLFIPSID	Census Block Full ID	Text	16	220010010703001
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. All fields are required.
2. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>

3. The ID field is a sequential integer ranging from 1 to the total number of census blocks.
4. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
5. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.
6. The Louisiana FIPS codes should be entered based on reference table A-5 in Appendix.

### 3.4 Submittal of Residential Broadband Service Speeds in the Provider’s Service Area -- Service Overview (Optional)

<b>Field Name</b>	<b>Alias</b>	<b>Type</b>	<b>Length</b>	<b>Example</b>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
FRN	Provider FCC Registration Number	Text	10	123456789
GEOUNITTYPE	Geographic Unit Type (Details below)	Text	4	CO
STATECOUNTYFIPS	State and County FIPS codes	Text	5	22021
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
ARPU	Average Revenue Per User_Speed_Offering	Double		65.00
SWNOMSPEED	Subscriber-weighted nominal speed (blended average rate in kbps) (see details below for methodology)	Double		1000
STATEABBR	Same value for all records	Text	2	LA

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
2. For reporting the technology of transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
3. The Geographic Unit Type should be populated according to the following reference:

<b>Code</b>	<b>Name</b>
CO	County

4. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.
5. A provider’s subscriber-weighted nominal speed (in kbps) should be calculated as the sum of the products of the provider’s advertised maximum download data transmission rate (in kbps) for each residential rate tier advertised by the provider in the MSA, times the average monthly number of residential subscribers receiving the advertised download transmission rate tier for the relevant

reporting month (i.e., June or December, as applicable), divided by the average total number of residential subscribers for all the included data transmission rate tiers in the MSA for that month. This is expressed in the following formula:

$$\frac{(\text{speed tier-1 in kbps} \times \text{no. of tier-1 subscribers}) + (\text{speed tier-2 in kbps} \times \text{no. of tier-2 subscribers}) + \dots}{\text{total average monthly subscribers}}$$

For example, if the service provider offers two tiers of service with advertised maximum download speeds of 1500 kbps and 6000 kbps, calculate the product of 1500 kbps times the average monthly number of residential subscribers to the 1500 kbps speed tier plus the product of 6000 kbps times the average monthly number of residential subscribers to the 6000 kbps speed tier and divide the sum by the sum (or total) of the average monthly number of residential subscribers in both tiers.

### 3.5 Submittal of Broadband Middle-mile and Backbone Interconnection Points

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
FRN	Provider FCC Registration Number	Text	10	123456789
OWNERSHIP	Is the facility owned (0) or leased (1)?	Integer		0
BHCAPACITY	Serving capacity of transport facility (see details below)	Integer		2
BHTYPE	Type of transport facility (1=Fiber; 2=Copper; 3=Hybrid Fiber Coax (HFC); 4=Wireless)	Integer		1
LATITUDE	Latitude in decimal degrees	Double		37.407229
LONGITUDE	Longitude in decimal degrees	Double		-122.107162
ELEVFEET	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade)	Integer		25.63
STATEABBR	Same value for all records	Text	2	LA
FULLFIPSID	Census Block Full ID	Text	16	220010010703001

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
2. The capacity of the Serving Facility should represent the capacity as currently configured and be expressed according to the following reference:

<u>Code</u>	<u>Interconnection Point Data Rate</u>
1	Multiple T1s and less than 40 mbps
2	Greater than 40 mbps and less than 150 mbps
3	Greater than 150 mbps and less than 600 mbps
4	Greater than or equal to 600 mbps and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps



6	Greater than or equal to 10 gbps
---	----------------------------------

- Coordinates should be expressed using the WGS 1984 geographic coordinate system.

### 3.6 Submittal of Broadband Last Mile Connection Points (Optional)

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	"Doing Business As" Name	Text	200	Generic Provider.
FRN	Provider FCC Registration Number	Text	10	123456789
OWNERSHIP	Is the facility owned (0) or leased (1)?	Integer		0
BHCAPACITY	Serving capacity of transport facility (see details below)	Integer		2
BHTYPE	Type of transport facility (1=Fiber; 2=Copper; 3=Hybrid Fiber Coax (HFC); 4=Wireless)	Integer		1
NBRSERVED	County of end users served from this point of aggregation.	Integer		68253
LATITUDE	Latitude in decimal degrees	Double		37.407229
LONGITUDE	Longitude in decimal degrees	Double		-122.107162
ELEVFEET	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade)	Integer		25.63
STATEABBR	Same value for all records	Text	2	LA

- Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
- The capacity of the Serving Facility should represent the capacity as currently configured and be expressed according to the following reference:

<u>Code</u>	<u>Interconnection Point Data Rate</u>
1	Multiple T1s and less than 40 mbps
2	Greater than 40 mbps and less than 150 mbps
3	Greater than 150 mbps and less than 600 mbps
4	Greater than or equal to 600 mbps and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps
6	Greater than or equal to 10 gbps

- Coordinates should be expressed using the WGS 1984 geographic coordinate system.

### 3.7 Submittal of Community Anchor Institutions Served by Broadband Provider

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
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ANCHORNAME	Name	Text	200	Anytown High School
ADDRESS	Complete Address	Text	200	222 High School Drive South, Anytown, LA 12345-0000
BLDGNBR	Building Number	Text	10	101
PREDIR	Prefix Direction	Text	25	
STREETNAME	Street Name	Text	50	Main
STREETTYPE	Street Type	Text	25	Street
SUFFDIR	Suffix Direction	Text	25	
CITY	City	Text	50	Anytown
STATECODE	Two Letter State Abbreviation	Text	2	LA
ZIP5	5 digit Zipcode	Text	5	12345
ZIP4	4-digit add-on code (with leading zeros)	Text	4	0000
LATITUDE	Latitude in decimal degrees	Double		40.446742
LONGITUDE	Longitude in decimal degrees	Double		-80.015745
CAICAT	Category (see details below for codes)	Text	2	1
BBSERVICE	Does institution subscribe to broadband service at location? (Y or N response)	Text	2	Y
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
SUBSCRBDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
SUBSCRBUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
FULLFIPSID	Full Census Block ID	Text	16	220010010703001

1. The category of each Community Anchor Institution should be expressed according to the following reference:

<u>Code</u>	<u>Category</u>
1	School – K through 12
2	Library
3	Medical/healthcare
4	Public safety
5	University, college, other post-secondary
6	Other community support – government
7	Other community support – nongovernmental

2. For reporting the technology of transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two

directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.

3. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.

### 3.8 Submittal of Wireline Broadband Services Not Provided to a Specific Address (Optional)

<b>Field Name</b>	<b>Alias</b>	<b>Type</b>	<b>Length</b>	<b>Example</b>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider’s services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>

2. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
3. The capacity of the Serving Facility should represent the capacity as currently configured and be expressed according to the following reference:

<u>Code</u>	<u>Data Rate</u>
1	Less than 1.5 mbps
2	Greater than or equal to 1.5 mbps and less than 3 mbps
3	Greater than or equal to 3 mbps and less than 6 mbps
4	Greater than or equal to 6 mbps and less than 10 mbps
5	Greater than or equal to 10 mbps and less than 25 mbps
6	Greater than or equal to 25 mbps and less than 50 mbps
7	Greater than or equal to 50 mbps and less than 100 mbps
8	Greater than or equal to 100 mbps and less than 1 gbps
9	Greater than or equal to 1 gbps

4. Coordinates should be expressed using the WGS 1984 geographic coordinate system.

## 4. Wireless Data Standards

### 4.1 Submittal of Broadband Data for Individual Street Addresses

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider’s services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
ADDRESS	Complete Address	Text	100	101 Main Street Anytown, LA 12345-0000
BLDGNBR	Building Number	Text	10	101
PREDIR	Prefix Direction	Text	25	
STREETNAME	Street Name	Text	50	Main
STREETTYPE	Street Type	Text	25	Street
SUFFDIR	Suffix Direction	Text	25	
CITY	City	Text	50	Anytown
STATECODE	Two Letter State Abbreviation	Text	2	LA
ZIP5	5 digit Zipcode	Text	5	12345
ZIP4	4-digit add-on code (with leading zeros)	Text	4	0000
LATITUDE	Latitude in decimal degrees	Double		40.446742
LONGITUDE	Longitude in decimal degrees	Double		-80.015745
ENDUSERCAT	Category of End User Served at Address (see Appendix A-2 for codes)	Text	2	1
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4	Text	2	4

	for applicable codes per Technology)			
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3
FULLFIPSID	Full Census Block ID	Text	16	220010010703001

1. All fields are required and must contain a valid value unless not applicable for a particular record: i.e. street does not have a prefix direction, suffix direction, etc.
2. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
3. The ID field is a sequential integer ranging from 1 to the total number of addresses.
4. Address data fields should be space-delimited in standardized Postal Service Form. See <http://pe.usps.gov/cpim/ftp/pubs/Pub28/pub28.pdf>.
5. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
6. Categories of End Users should be entered as integers based on reference table A-2 in Appendix A.
7. Speed tiers should be entered as integers based on reference table A-3 in Appendix A.

## 4.2 Submittal of Broadband Data by Road Segments in Areas Where Census Blocks Are Greater Than 2 Square Miles

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
TLID	Census TIGER Permanent Feature Identifier	Text	15	
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider’s services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
ADDMIN	Minimum Address Range Served	Text	10	100
ADDMAX	Maximum Address Range Served	Text	10	115
PREDIR	Prefix Direction	Text	25	
STREETNAME	Street Name	Text	50	Main
STREETTYPE	Street Type	Text	25	Street

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
TLID	Census TIGER Permanent Feature Identifier	Text	15	
SUFFDIR	Suffix Direction	Text	25	
CITY	City	Text	50	Anytown
STATECODE	Two Letter State Abbreviation	Text	2	LA
ZIP5	5 digit Zipcode	Text	5	12345
ZIP4	4-digit add-on code (with leading zeros)	Text	4	0000
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. All fields are required and must contain a valid value unless not applicable for a particular record: i.e. street does not have a prefix direction, suffix direction, etc.
2. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
3. The ID field is a sequential integer ranging from 1 to the total number of road segments.
4. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
5. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.

## 4.3 Submittal of Broadband Information for Census Blocks No Greater Than 2 Square Miles

Field Name	Alias	Type	Length	Example
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	"Doing Business As" Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider's services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
STATEFIPS	"22" for all Records (Louisiana FIPS Code)	Text	2	22
COUNTYFIPS	County FIPS Code (see Appendix A-5 for Codes)	Text	3	001
TRACT	Census Tract	Text	6	001070
BLOCKID	Census Block	Text	4	3001
FULLFIPSID	Census Block Full ID	Text	16	220010010703001
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. All fields are required.
2. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>



3. The ID field is a sequential integer ranging from 1 to the total number of census blocks.
4. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
5. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.
6. The Louisiana FIPS codes should be entered based on reference table A-5 in Appendix.

## 4.4 Submittal of Residential Broadband Service Speeds in the Provider’s Service Area -- Service Overview

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
FRN	Provider FCC Registration Number	Text	10	123456789
GEOUNITTYPE	Geographic Unit Type (Details below)	Text	4	CO
STATECOUNTYFIPS	State and County FIPS codes	Text	5	22021
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
ARPU	Average Revenue Per User_Speed_Offering	Double		65.00
SWNOMSPEED	Subscriber-weighted nominal speed (blended average rate in kbps) (see details below for methodology)	Double		1000
STATEABBR	Same value for all records	Text	2	LA

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
2. For reporting the technology of transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
3. The Geographic Unit Type should be populated according to the following reference:

<u>Code</u>	<u>Name</u>
CO	County

4. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.
5. A provider’s subscriber-weighted nominal speed (in kbps) should be calculated as the sum of the products of the provider’s advertised maximum download data transmission rate (in kbps) for each residential rate tier advertised by the provider in the MSA, times the average monthly number of residential subscribers receiving the advertised download transmission rate tier for the relevant

reporting month (i.e., June or December, as applicable), divided by the average total number of residential subscribers for all the included data transmission rate tiers in the MSA for that month. This is expressed in the following formula:

$$\frac{(\text{speed tier-1 in kbps} \times \text{no. of tier-1 subscribers}) + (\text{speed tier-2 in kbps} \times \text{no. of tier-2 subscribers}) + \dots}{\text{total average monthly subscribers}}$$

For example, if the service provider offers two tiers of service with advertised maximum download speeds of 1500 kbps and 6000 kbps, calculate the product of 1500 kbps times the average monthly number of residential subscribers to the 1500 kbps speed tier plus the product of 6000 kbps times the average monthly number of residential subscribers to the 6000 kbps speed tier and divide the sum by the sum (or total) of the average monthly number of residential subscribers in both tiers.

## 4.5 Submittal of Broadband Middle-mile and Backbone Interconnection Points

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
FRN	Provider FCC Registration Number	Text	10	123456789
OWNERSHIP	Is the facility owned (0) or leased (1)?	Integer		0
BHCAPACITY	Serving capacity of transport facility (see details below)	Integer		2
BHTYPE	Type of transport facility (1=Fiber; 2=Copper; 3=Hybrid Fiber Coax (HFC); 4=Wireless)	Integer		1
LATITUDE	Latitude in decimal degrees	Double		37.407229
LONGITUDE	Longitude in decimal degrees	Double		-122.107162
ELEVFEET	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade)	Integer		25.63
STATEABBR	Same value for all records	Text	2	LA
FULLFIPSID	Census Block Full ID	Text	16	220010010703001

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
2. The capacity of the Serving Facility should represent the capacity as currently configured and be expressed according to the following reference:

<u>Code</u>	<u>Interconnection Point Data Rate</u>
1	Multiple T1s and less than 40 mbps
2	Greater than 40 mbps and less than 150 mbps
3	Greater than 150 mbps and less than 600 mbps
4	Greater than or equal to 600 mbps and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps

6	Greater than or equal to 10 gbps
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- Coordinates should be expressed using the WGS 1984 geographic coordinate system.

## 4.6 Submittal of Broadband Last Mile Connection Points (Optional)

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	"Doing Business As" Name	Text	200	Generic Provider.
FRN	Provider FCC Registration Number	Text	10	123456789
OWNERSHIP	Is the facility owned (0) or leased (1)?	Integer		0
BHCAPACITY	Serving capacity of transport facility (see details below)	Integer		2
BHTYPE	Type of transport facility (1=Fiber; 2=Copper; 3=Hybrid Fiber Coax (HFC); 4=Wireless)	Integer		1
NBRSERVED	County of end users served from this point of aggregation.	Integer		68253
LATITUDE	Latitude in decimal degrees	Double		37.407229
LONGITUDE	Longitude in decimal degrees	Double		-122.107162
ELEVFEET	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade)	Integer		25.63
STATEABBR	Same value for all records	Text	2	LA

- Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
- The capacity of the Serving Facility should represent the capacity as currently configured and be expressed according to the following reference:

<u>Code</u>	<u>Interconnection Point Data Rate</u>
1	Multiple T1s and less than 40 mbps
2	Greater than 40 mbps and less than 150 mbps
3	Greater than 150 mbps and less than 600 mbps
4	Greater than or equal to 600 mbps and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps
6	Greater than or equal to 10 gbps

- Coordinates should be expressed using the WGS 1984 geographic coordinate system.

## 4.7 Submittal of Community Anchor Institutions Served by Broadband Provider

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
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ANCHORNAME	Name	Text	200	Anytown High School
ADDRESS	Complete Address	Text	200	222 High School Drive South, Anytown, LA 12345-0000
BLDGNBR	Building Number	Text	10	101
PREDIR	Prefix Direction	Text	25	
STREETNAME	Street Name	Text	50	Main
STREETTYPE	Street Type	Text	25	Street
SUFFDIR	Suffix Direction	Text	25	
CITY	City	Text	50	Anytown
STATECODE	Two Letter State Abbreviation	Text	2	LA
ZIP5	5 digit Zipcode	Text	5	12345
ZIP4	4-digit add-on code (with leading zeros)	Text	4	0000
LATITUDE	Latitude in decimal degrees	Double		40.446742
LONGITUDE	Longitude in decimal degrees	Double		-80.015745
CAICAT	Category (see details below for codes)	Text	2	1
BBSERVICE	Does institution subscribe to broadband service at location? (Y or N response)	Text	2	Y
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
SUBSCRBDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
SUBSCRBUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
FULLFIPSID	Full Census Block ID	Text	16	220010010703001

1. The category of each Community Anchor Institution should be expressed according to the following reference:

<u>Code</u>	<u>Category</u>
1	School – K through 12
2	Library
3	Medical/healthcare
4	Public safety
5	University, college, other post-secondary
6	Other community support – government
7	Other community support – nongovernmental

2. For reporting the technology of transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two

directions of information transfer (“downstream” and “upstream”), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.

3. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.

## 4.8 Submittal of Wireless Broadband Services Not Provided to a Specific Address

<b>Field Name</b>	<b>Alias</b>	<b>Type</b>	<b>Length</b>	<b>Example</b>
PROVNAME	Provider Name	Text	200	Generic Provider, Inc.
DBANAME	“Doing Business As” Name	Text	200	Generic Provider.
RESELLER	Is a reseller of broadband services and is reselling another provider’s services?	Boolean		Y/N
FRN	Provider FCC Registration Number	Text	10	123456789
TRANSTECH	Technology of Transmission (see Appendix A-1 for codes)	Integer		10
SPECTRUM	Transmission Spectrum used	Integer		7
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	7
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>

2. All map areas should be closed, non-overlapping polygons with a single, unique identifier.
  3. Any variation in any of the required fields necessitates the creation of a separate closed, non-overlapping polygon.
  4. In the area covered by each polygon, subscribers must have broadband service with the speed characteristics shown in the data record 95% of the time to within 50 feet of the polygon's boundary.
  5. The technology of transmission should be entered as an integer based on the coding scheme shown above.
  6. The speed tiers should be entered as integers according to the reference above.
  7. The data should be expressed using the WGS 1984 geographic coordinate system.
  8. Maps should be accompanied by metadata or a plain text "readme" file that contains a comprehensive explanation of the methodology employed to generate the map layer including any necessary assumptions and an assessment of the accuracy of the finished product.
  9. For reporting the Technology of Transmission, report the technology used by the portion of the connection that terminates at the end-user location. If different technologies are used in the two directions of information transfer ("downstream" and "upstream"), report the connection in the technology category for the downstream direction. The technology of transmission should be entered as an integer based on reference table A-1 in Appendix A.
10. Spectrum Used Codes

<u>Code</u>	<u>Technology</u>
1	is Cellular spectrum (824-849 MHz; 862-869) used to provide service
2	is 700 MHz spectrum (698-758 MHz; 775-788 MHz; 805-806 MHz) used to provide service
3	is Broadband Personal Communications Services spectrum (1850-1915 MHz; 1930-1995) used to provide service Personal Communications Services spectrum (1850-1915 MHz; 1930-1995) used to provide service
4	is Advanced Wireless Services spectrum (1710-1755 MHz; 2100-2155) used to provide service
5	is Broadband Radio Service/Educational Broadband Service spectrum (2496-2690 MHz) used to provide service Radio Service/Educational Broadband Service spectrum (2496-2690 MHz) used to provide service
6	is Unlicensed (including broadcast television "white spaces") spectrum used to provide service
7	Specialized Mobile Radio Service (SMR) (817-824 MHz; 862-869 MHz; 896-901 MHz; 935-940 MHz)
8	Wireless Communications Service (WCS) spectrum (2305-2320 MHz; 2345-2360 MHz), 3650-3700 MHz
9	Satellite (L-band, Big LEO, Little LEO, 2 GHz)

11. The Speed Tiers should be entered as integers based on reference table A-3 in Appendix A.

## 4.9 Submittal of Wireless WISP Antenna features (Fixed Wireless Providers Only)

<u>Field Name</u>	<u>Alias</u>	<u>Type</u>	<u>Length</u>	<u>Example</u>
PROVNAME	Provider Name	Text	200	

<b><u>Field Name</u></b>	<b><u>Alias</u></b>	<b><u>Type</u></b>	<b><u>Length</u></b>	<b><u>Example</u></b>
DBANAME	"Doing Business As" Name	Text	200	
FRN	Provider FCC Registration Number	Text	10	123456789
SITE_NAME	Location Name	Text	25	Bird Mtn.
<b>LATITUDE</b>	<b>Latitude in decimal degrees</b>	<b>Double</b>		37.407229
<b>LONGITUDE</b>	<b>Longitude in decimal degrees</b>	<b>Double</b>		-122.107162
<b>ANT_HEIGHT</b>	<b>Transmitting Antenna Height (center above ground in feet)</b>	<b>Double</b>		120
TRANS_MAKE	Transmitter Manufacturer	Text	20	
TRANS_MODEL	Transmitter Model	Text	20	
<b>RADIUS</b>	<b>Transmission radius of the antenna in miles</b>	<b>Double</b>		<b>3</b>
TRANS_ERP	Transmitter ERP (dBm)	Double		33.85
<b>AZIMUTH</b>	<b>Azimuth (Degrees)</b>	<b>Integer</b>		
<b>FREQUENCY</b>	<b>Frequency (MHz)</b>	<b>Integer</b>		900
<b>ANT_GAIN</b>	<b>Transmitting Antenna Gain (dBi)</b>	<b>Integer</b>		14
ANT_MAKE	Antenna Manufacturer	Text	20	Ubiquiti
ANT_MODEL	Antenna Model Number	Text	20	
SUB_HEIGHT	Customer Antenna Height (Ft)	Integer		30
SUB_GAIN	Customer Antenna Gain (dBi)	Integer		20
SUB_RS	Customer Equipment Receiver Sensitivity (dBm)	Integer		-93
MAXADDOWN	Speed tier code for the maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	5
MAXADUP	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available at the address (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICDOWN	Speed tier code for the typical downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	4
TYPICUP	Speed tier code for the typical upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Appendix A-3 for codes and Appendix A-4 for applicable codes per Technology)	Text	2	3

1. Instructions for providers needing to obtain a FRN can be accessed at <https://fjallfoss.fcc.gov/coresWeb/publicHome.do>
2. Coordinates should be expressed using the WGS 1984 geographic coordinate system.

## Appendix A – Code Tables

### A-1 Technology of Transmission

<u>Code</u>	<u>Technology</u>	<u>Details</u>	<u>Category</u>
10	Asymmetric xDSL		Wireline
20	Symmetric xDSL		Wireline
30	Other Copper Wireline	All copper-wire based technologies other than xDSL (Ethernet over copper and T-1 are examples)	Wireline
40	Cable Modem – DOCSIS 3.0		Wireline
41	Cable Modem – Other		Wireline
50	Optical Carrier/Fiber to the End User	Fiber to the home or business end user (does not include “fiber to the curb”)	Wireline
60	Satellite		Wireless
70	Terrestrial Fixed Wireless - Unlicensed		Wireless
71	Terrestrial Fixed Wireless - Licensed		Wireless
80	Terrestrial Mobile Wireless		Wireless
90	Electric Power Line		Wireline
0	All Other	Any specific technology not listed above	Other

### A-2 Categories of End Users

<u>End User Category Code</u>	<u>End User Category</u>	<u>Description</u>
1	Residential	Address denotes a residential living unit, individual living unit in institutional settings such as college dormitories and nursing homes and other locations designed primarily for residential use at which broadband service is available.
2	Governmental	Address denotes a state or local government location at which broadband service is available.
3	Small Business	Address denotes the location of a small business.
4	Medium or Large Enterprise	Address denotes the location of a medium or large enterprise.
5	Other	Address denotes a location not meeting any of the above descriptions.



### A-3 Speed Tiers

<u>Upload Speed Tier</u>	<u>Download Speed Tier</u>	<u>Description</u>
1	-	Less than or equal to 200 kbps
2	-	Greater than 200 kbps and less than 768 kbps
3	3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	5	Greater than or equal to 3 mbps and less than 6 mbps
6	6	Greater than or equal to 6 mbps and less than 10 mbps
7	7	Greater than or equal to 10 mbps and less than 25 mbps
8	8	Greater than or equal to 25 mbps and less than 50 mbps
9	9	Greater than or equal to 50 mbps and less than 100 mbps
10	10	Greater than or equal to 100 mbps and less than 1 gbps
11	11	Greater than or equal to 1 gbps

### A-4 Valid Speed Tiers per Technology

The NTIA expects Speed Tier values to fall within these ranges for each Technology type used, otherwise the data will not pass validation. Any information received outside the extent of this rule will be returned for verification.

		Valid Download Speed Tier Code										
		1	2	3	4	5	6	7	8	9	10	11
Technology Code	10			x	x	x	x	x	x			
	20			x	x	x	x	x	x			
	30			x	x	x	x	x	x			
	40			x	x	x	x	x	x	x		
	41			x	x	x	x	x	x	x		
	50			x	x	x	x	x	x	x	x	x
	60			x	x	x	x					
	70			x	x	x	x					
	71			x	x	x	x					
	80			x	x	x	x					
	90			x	x	x	x					
	0											
		Valid Upload Speed Tier Code										
		1	2	3	4	5	6	7	8	9	10	11
Technology Code	10		x	x	x	x	x	x				
	20			x	x	x	x	x	x			
	30		x	x	x	x	x	x	x			
	40		x	x	x	x	x	x	x	x		

41		x	x	x	x	x	x	x	x		
50		x	x	x	x	x	x	x	x	x	x
60		x	x	x	x	x					
70			x	x	x	x					
71			x	x	x	x					
80		x	x	x	x	x					
90		x	x	x	x	x					
0											

## A-5 Louisiana Parish FIPS Codes

<u>Parish</u> <u>FIPS</u>	<u>Parish</u>	<u>Parish</u> <u>FIPS</u>	<u>Parish</u>	<u>Parish</u> <u>FIPS</u>	<u>Parish</u>
001	Acadia	045	Iberia	089	St. Charles
003	Allen	047	Iberville	091	St. Helena
005	Ascension	049	Jackson	093	St. James
007	Assumption	051	Jefferson	095	St. John the Baptist
009	Avoyelles	053	Jefferson Davis	097	St. Landry
011	Beauregard	055	Lafayette	099	St. Martin
013	Bienville	057	Lafourche	101	St. Mary
015	Bossier	059	La Salle	103	St. Tammany
017	Caddo	061	Lincoln	105	Tangipahoa
019	Calcasieu	063	Livingston	107	Tensas
021	Caldwell	065	Madison	109	Terrebonne
023	Cameron	067	Morehouse	111	Union
025	Catahoula	069	Natchitoches	113	Vermilion
027	Claiborne	071	Orleans	115	Vernon
029	Concordia	073	Ouachita	117	Washington
031	De Soto	075	Plaquemines	119	Webster
033	East Baton Rouge	077	Pointe Coupee	121	West Baton Rouge
035	East Carroll	079	Rapides	123	West Carroll
037	East Feliciana	081	Red River	125	West Feliciana Parish
039	Evangeline	083	Richland	127	Winn
041	Franklin	085	Sabine		
043	Grant	087	St. Bernard		

## Appendix B – Metadata Template

The metadata templates are provided in the Extensible Markup Language (XML) format and can be download at <http://www.broadband.la.gov>. This format can be viewed and edited in most commonly used text editors, such as Microsoft WordPad and Microsoft Notepad. The XML metadata templates may also be applied to an existing feature class or shapefile utilizing the

ArcCatalog Metadata Tools. The Provider may submit the completed metadata in any FGDC CSDGM compliant format (FAQ, HTML, SGML, TXT or XML).

## Appendix C – Letter of Transmittal

The Letter of Transmittal may be downloaded from <http://www.broadband.la.gov>

### Letter of Transmittal

Date: \_\_\_\_\_

<b>To: Michael Baker Jr., Inc.</b>	<b>From:</b>
Vicki L. Munn	Provider Contact:
2600 CitiPlace Drive, Suite 450, Baton Rouge, LA 70808	Address:
vmunn@mbakercorp.com	e-mail:
225-923-8385	Phone:

**Brief Description:** *A brief description of the submittal including the file type being submitted (along with any special instructions for accessing or using the data).*

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#### Submittal Checklist:

Providers should use the following checklist to verify the data being submitted to Baker meets the standards and that all necessary information has been included.

#### Tabular Data

- ☐ Have any attribute fields been left unpopulated that can be populated with Provider information?
- ☐ Does each database record have a unique link to a point, line or polygon in a geospatial file, Census block, Census street segment, or Census Metropolitan/ Micropolitan Statistical Area?
- ☐ Has the attribute data been provided and formatted according to these Guidelines?

#### Geospatial Data

- ☐ Are the linear features continuous without gaps or overshoots (correct feature topology)?
- ☐ Has the database record been uniquely linked to the point, line or polygon feature (does every geographic feature have a database record)?
- ☐ Does each feature have a complete database record as defined in these Guidelines (no incomplete attribution)?
- ☐ If the attribute data is provided in a non-geographic format, has the file been exported according to these Guidelines?

#### All Submission Data

- ☐ Do the file names meet the naming conventions defined in these Guidelines?

- ☐ Do the files meet the formatting requirements as defined in these Guidelines?
- ☐ Are all files included for the Submittal Area?
- ☐ Is the contact information current and correct?
- ☐ Has all metadata information been formatted and submitted according to the requirements as defined in these Guidelines?

### **Submitting the Data**

To send your data to Baker, perform the following steps:

- Prepare the required transmittal letter according to the Guidelines (download the Letter of Transmittal at <http://www.broadband.la.gov>.)
- All digital files including geospatial data, tabular data and metadata will be submitted electronically to Baker via a secure FTP, <https://ftpbroadband.mbakercorp.com> or CDs and/or DVDs. Delivery media may be sent by mail or courier to the address provided below.
- For security reasons, each Provider is required to contact Vicki Munn to obtain a user name and password (see contact information below) for the secure FTP site.

### **Contact Information:**

#### **Michael Baker Jr., Inc.**

2600 Citiplace Drive, Suite 450  
Baton Rouge, LA 70808

#### **Primary**

Vicki Munn, Local Louisiana Provider Outreach  
Contact  
vmunn@mbakercorp.com  
225-923-8385